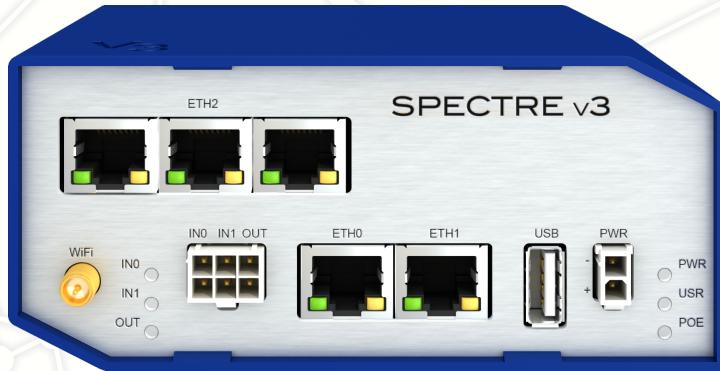


# Industrial router **SPECTRE v3 ERT**

## USER'S MANUAL



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## Used Symbols



*Danger* – important notice, which may have an influence on the user's safety or the function of the device.



*Attention* – notice on possible problems, which can arise in specific cases.



*Information, notice* – information, which contains useful advice or special interest.

## GPL License

Source codes under GPL license are available free of charge by sending an email to:

info@conel.cz.



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# 1. Safety Instruction



***Please, observe the following instructions:***

- The router must be used in compliance with all applicable international and national laws and in compliance with any special restrictions regulating the utilization of the router in prescribed applications and environments.
- To prevent possible injury to health and damage to appliances and to ensure that all the relevant provisions have been complied with, use only the original accessories. Unauthorised modifications or utilization of accessories that have not been approved may result in damage to the router and in a breach of applicable regulations. Unauthorized modifications or utilization of accessories that have not been approved may result in the termination of the validity of the guarantee.
- The router can not be opened.
- It must not be exceeded by the maximum voltage 60 V DC power connector on the router.
- Do not expose the router to extreme ambient conditions. Protect the router against dust, moisture and high temperature.
- The router should not be used at petrol stations of flammable and explosive materials. We remind the users of the duty to observe the restrictions concerning the utilization of radio devices at petrol stations, in chemical plants, or in the course of blasting works in which explosives are used.
- Switch off the router when travelling by plane. Utilization of the router in a plane may endanger the operation of the plane or interfere with the mobile telephone network, and may be unlawful. Failure to observe these instructions may result in the suspension or cancellation of telephone services for the respective client, or, it may result in legal sanctions; it may also result in both eventualities.
- When using the router in the close proximity of personal medical devices, such as cardiac pacemakers or hearing aids, you must proceed with heightened caution.
- If it is in the proximity of TV sets, radio receivers and personal computers, the telephone may cause interference.
- It is recommended that you should create an appropriate copy or backup of all the important settings that are stored in the memory of the device.

## 2. Product Disposal Instructions

The WEEE (Waste Electrical and Electronic Equipment: 2002/96/EC) directive has been introduced to ensure that electrical/electronic products are recycled using the best available recovery techniques to minimize the impact on the environment. This product contains high quality materials and components which can be recycled. At the end of its life this product **MUST NOT** be mixed with other commercial waste for disposal. Check the terms and conditions of your supplier for disposal information.

## 3. Router Description

Industrial router SPECTRE v3 ERT is an ideal device for the realization of a secure connection of two local area networks (LANs). Interconnection is carried out using two ETHERNET 10/100 interfaces and secure tunnel (IPSec, OpenVPN, L2TP).

The other equally important ways to use this router is to connect any device with RS232, RS485 or I/O interface to the local network (LAN). For this purpose, SPECTRE v3 ERT is equipped with two ETHERNET 10/100 ports and other interfaces based on the version of the router chosen by the user.

As a standard, this router is equipped with two ETHERNET 10/100 ports, one USB 2.0 Host port, two binary inputs and one output (I/O connector). An integral part of the router is also a memory card reader placed on the rear panel. This reader allows SPECTRE v3 ERT to operate with microSD cards and increase storage space of the router up to 64 GB (32 GB in case of SDHC cards). The router can be equipped with WiFi module on customer's request, however it is not possible to add it to the router at some time in the future. Richer range of interfaces is available in versions containing three switched Ethernets. SPECTRE v3 ERT is supplied either in a plastic or metal casing, based on the requirements of the customer.

For configuration of the industrial router is available web interface protected by password. Web interface provides (after logging in) detailed statistics about the router activities, signal strength, detailed system log etc. This device supports the creation of VPN tunnels using technologies IPSec, OpenVPN and L2TP for secure communications. There are also supported functions such as DHCP, NAT, NAT-T, DynDNS, NTP, VRRP, control by SMS, backup primary connection and many other functions.

Other diagnostic functions ensuring continuous communication include hardware watchdog which monitors the status of the router. Using a special window (start up script window) you may insert Linux scripts for various actions. For some applications is crucial the possibility to create several different configurations for one router. These configurations can be switched as necessary (for example using SMS, binary input status, etc.). SPECTRE v3 ERT routers may automatically upgrade configuration and firmware from server. This allows mass reconfiguration of many routers in one time.

For further facilitating of workig with routers can be used any additional software, e.g. R-SeeNet for permanent traffic monitoring of routers.



### Examples of possible applications

- mobile office
- fleet management
- security system
- telematic
- telemetric
- remote monitoring
- vending and dispatcher machines

## 4. Contents of Package



Basic delivered set of router includes:

- router,
- power supply,
- crossover UTP cable,
- 2.4 GHz WiFi antenna (**only for version with WiFi**),
- loose power and I/O connector (+8 pins<sup>1</sup>),
- clip for the DIN rail,
- paper start guide.



Figure 1: Contents of package

<sup>1</sup>These pins are designed for cables with a diameter from 0.2 to 0.8 mm<sup>2</sup>

# 5. Router Design

## 5.1 Router versions

SPECTRE v3 ERT router is supplied in the following versions (see table below). All versions are available in plastic or metal box according to customer requirements.

Router versions	BIN	BOUT	USB	SD	ETH	WiFi
Basic version	2 x	1 x	1 x	1 x	2 x	
Basic version with WiFi	2 x	1 x	1 x	1 x	2 x	1 x
Version with SWITCH	2 x	1 x	1 x	1 x	5 x	
Version with SWITCH & WiFi	2 x	1 x	1 x	1 x	5 x	1 x

Table 1: Router versions

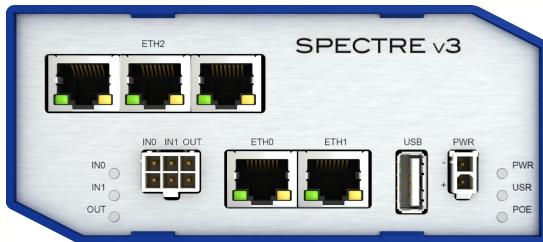


Figure 2: Version SWITCH (plastic)



Figure 4: Version SWITCH (metal)



Figure 3: Version SWITCH and WiFi (plastic)



Figure 5: Version SWITCH and WiFi (metal)

### 5.2 Delivery identification

Trade name	Type name	Other
SPECTRE v3 ERT	SPECTRE-v3-ERT	Router in a plastic or metal box

Table 2: Delivery identification



Figure 6: Label example

### 5.3 Ordering codes

Ordering codes overview is shown in the table below.

Name	Order code	Features – interfaces
SPECTRE v3 ERT set	SR300001xy*	5x ETH, 1x USB, 2x BI, 1x BO, 1x microSD reader
SPECTRE v3 ERT set	SR300101xy*	5x ETH, 1x USB, 2x BI, 1x BO, 1x microSD reader, WiFi

Table 3: Ordering codes overview



\* The user replaces letters "x" and "y" with one of the following values:

Letter x – type of router box

Type of box	Number in code
Plastic	1
Metal	2

Table 4: Type of router box

Letter y – type of connector on the power supply

Type of power supply	Number in code
Europe	1
UK & Ireland	2
Australia	3
North America	4

Table 5: Type of power supply



Examples of complete order code:

Order code	Features – interfaces	Box	Power supply
SR30000111	5x ETH, 1x USB, 2x BI, 1x BO, 1x microSD reader	plastic	Europe
SR30000122	5x ETH, 1x USB, 2x BI, 1x BO, 1x microSD reader	metal	UK & Ireland
SR30010113	5x ETH, 1x USB, 2x BI, 1x BO, 1x microSD reader, WiFi	plastic	Australia

Table 6: Examples of order code

## 5.4 Basic dimensions of router box

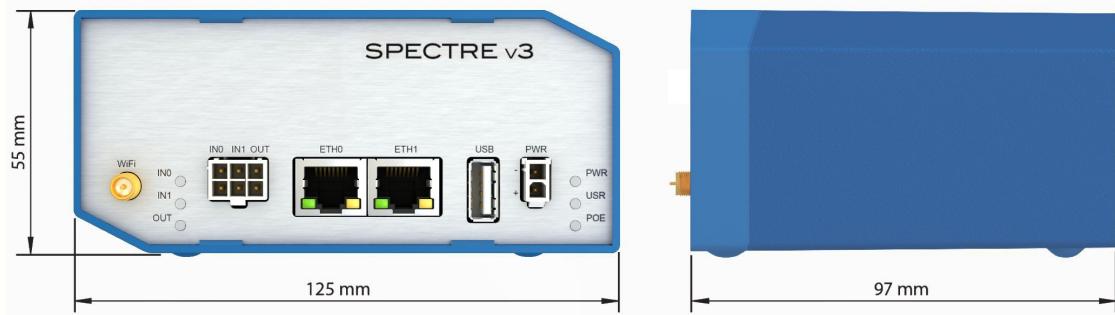


Figure 7: Basic dimensions of router box

## 5.5 Mechanical dimensions and mounting recommendations



Mounting recommendations:

- possibility to be put on a work surface,
- DIN rail with clips CPD3 (or CKD2 for metal version) are included.

For the most of applications with a built-in router in a switch board it is possible to recognize two kinds of environments:

- no public and industry environment of low voltage with high interference,
- public environment of low voltage without high interference.

For both of these environments it is possible to mount router to a switch board, the following there is no need to have examination immunity or issues in connection with EMC according to EN 60439-1 ed.2:00 + A1:04.



For compliance of EN 60439-1 ed.2:00 + A1:04 specification it is necessary to observe next assembly of the router to the switch – board:

- For every cables we recommend to bind the bunch, we recommend for this use:
  - Length of the bunch (combination of power supply and data cables) can be maximum 1.5 m. If the length of data cables exceeds 1.5 m or in the event of, the cable leads towards the switch – board. We recommend installing over – voltage protectors (surge suppressors).
  - With data cables they mustn't carry cables with reticular tension ~ 230 V/50 Hz.
- Sufficient space must be left before individual connectors for handling of cables,
- For correct function of the router we recommend to use in the switch-board earth-bonding distribution frame for grounding of power supply of router, data cables and antenna.

## 5.6 Removing from the DIN rail

Default position of CPD3 holder (or CKD2 holder for metal version), which is used for mounting the router on a DIN rail, is shown in the following figure:

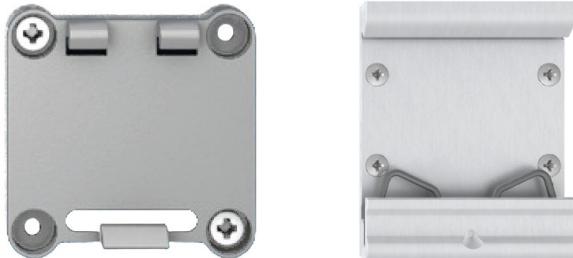


Figure 8: Default position of DIN holder

For removing from the DIN rail it is necessary to lightly push upward the router so that the top part of the CPD3 holder (or CKD2 for metal version) hitched to the DIN rail get out of this rail and then fold out the top part of the router away from the DIN rail.

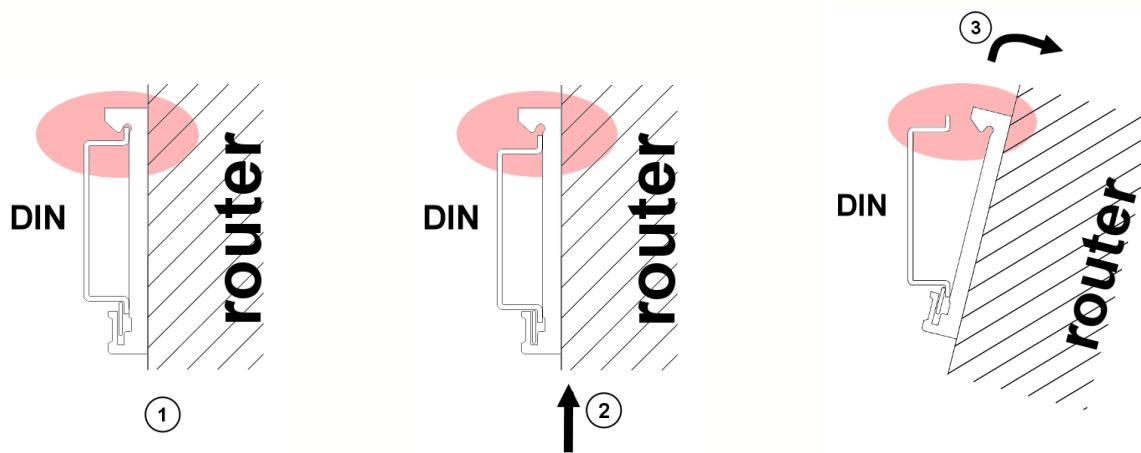


Figure 9: Removing from the DIN rail

### 5.7 Description of the rear panel

The rear panel contains only one holder for SD card (*SD*) and *RST* button used to restore default configuration and reboot the router.

### 5.8 Description of the front panel

On the front panel is the following:

Caption	Connector	Description
PWR	2-pin	Connector for the power supply
ETH0	RJ45	Connector for connection into the computer network
ETH1	RJ45	Connector for connection into the computer network
WiFi	R-SMA	Connector for WiFi antenna ( <b>only for versions with WiFi module!</b> )
USB	USB-A 2.0 Host	Connector for connection of USB devices to the router. Supports devices with PL-2303 and FTDI USB/RS232 converters.
I/O	6-pin	Connector for connection of the binary inputs and output

Table 7: Front panel description

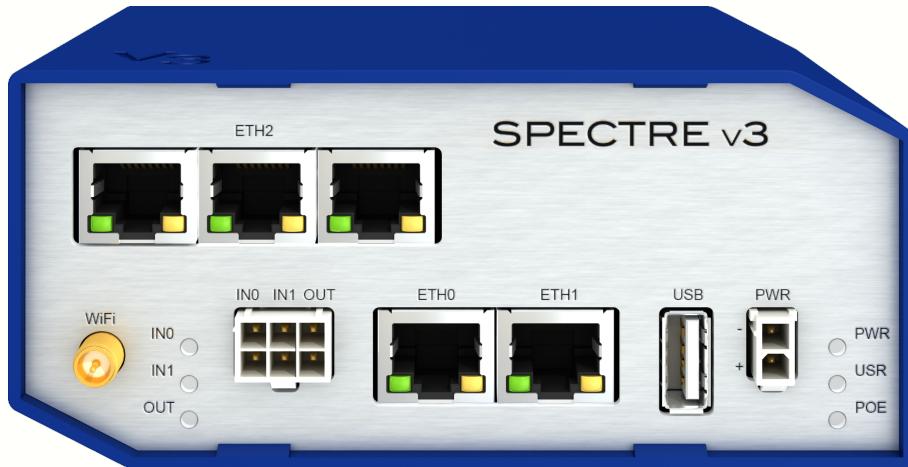


Figure 10: SPECTRE v3 ERT front panel

### 5.8.1 Status indication

About router status inform nine LED indicators on the front panel. Each ETH port has two additional LEDs that provide information about port status.

Caption	Color	State	Description
PWR	Green	Blinking On Fast blinking	Router is ready Starting of the router Updating firmware
USR	Yellow	—	Function of this LED diode can be selected by user
POE	Yellow Green	—	—
IN0	Green	On	Binary input no. 0 is active
IN1	Green	On	Binary input no. 1 is active
OUT	Yellow	On	Binary output is active
ETH0 ETH1	Green	On Off	Selected 100 Mbit/s Selected 10 Mbit/s
ETH0 ETH1	Yellow	On Blinking Off	The network cable is connected Data transmission The network cable is not connected

Table 8: Status indication

### 5.8.2 Power connector PWR

Panel socket 2-pin.

Pin number	Signal mark	Description
1	GND(-)	Negative pole of DC supply voltage
2	VCC(+)	Positive pole of DC supply voltage (+10 to +60 V DC)

Table 9: Connection of power connector

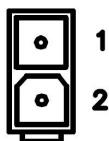


Figure 11: Power connector

Power supply for router must be between +10 V to +60 V DC supply. Protection against reversed polarity without signaling is built into the router.

SPECTRE v3 ERT can be put into low power mode using a special command. Then it can be awakened for example by an activity on binary input or using an internal timer.

Circuit example:

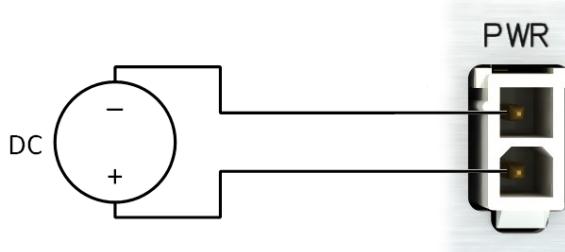


Figure 12: Connection of power supply

### 5.8.3 Antenna connector WiFi

If the router is equipped with WiFi module on the customer's request, appropriate antenna is connected to the reverse SMA connector (*WiFi*).

The external antenna is connected by screwing this antenna to the reverse SMA connector on the front panel of the router (see figure below).

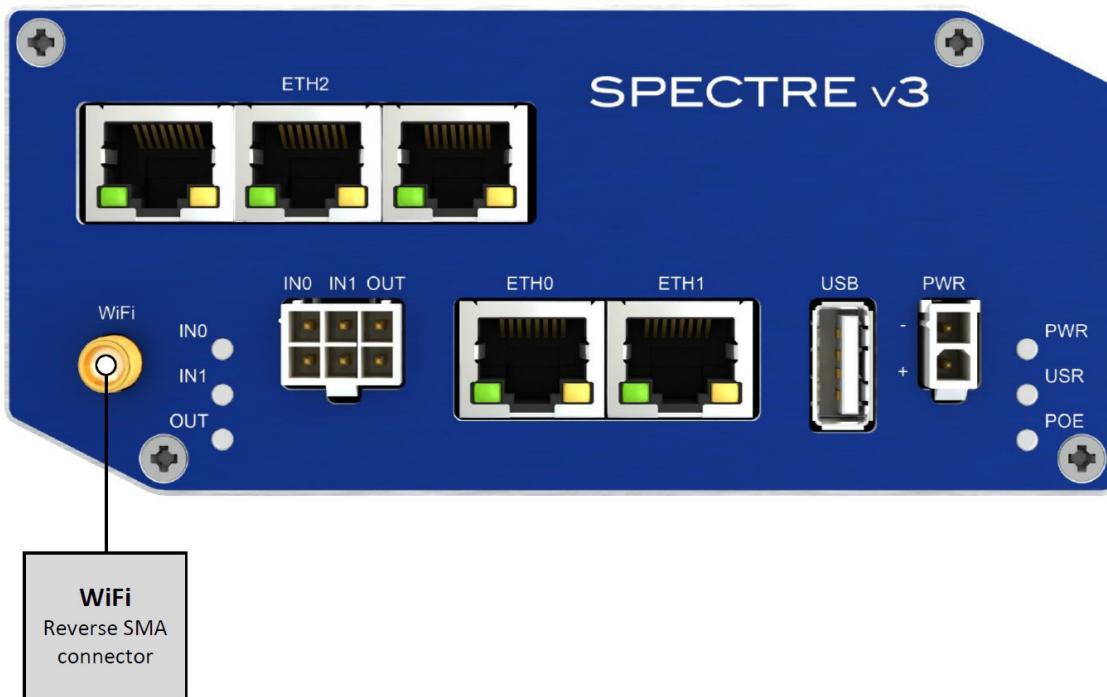


Figure 13: Antenna connector

### 5.8.4 MicroSD card reader

The microSD card reader is placed on the rear panel of the router (there is only a single slot). This card reader allows the router to operate with memory cards microSD. Technical specifications are stated in the table below.

Technical specifications of microSD card		
Supported technologies		SDHC, SDXC
Supported capacity	SDHC SDXC	up to 32 GB from 32 GB to 64 GB

Table 10: Technical specifications of microSD card

#### Changing the microSD card:

- Use the flat end of a spudger, or your fingernail, to press the microSD card slightly deeper into its slot until you hear a click.
- After the click, release the card and it will pop out of its slot.
- Remove the microSD card and push any other microSD card into the slot until it clicks in place.



Figure 14: SD card

### 5.8.5 Ethernet Port (ETH0 and ETH1)

Panel socket RJ45.

Pin	Signal mark	Description	Data flow direction
1	TXD+	Transmit Data – positive pole	Input/Output
2	TXD-	Transmit Data – negative pole	Input/Output
3	RXD+	Receive Data – positive pole	Input/Output
4	DC+	POE power + (if POE is equipped)	
5	DC+	POE power + (if POE is equipped)	
6	RXD-	Receive Data – negative pole	Input/Output
7	DC-	POE power - (if POE is equipped)	
8	DC-	POE power - (if POE is equipped)	

Table 11: Connection of Ethernet connector

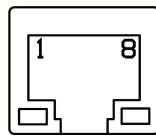


Figure 15: Ethernet connector

Ethernet cable plug into the RJ45 connector labeled as ETH0 or ETH1 (see figure below).

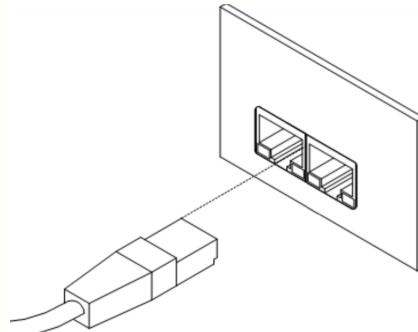


Figure 16: Connection of ethernet cable

The insulation strength is up to 1.5 kV.



### 5.8.6 USB Port

Panel socket USB-A.

Pin	Signal mark	Description	Data flow direction
1	+5 V	Positive pole of 5 V DC supply voltage, 0.5 A	
2	USB data -	USB data signal – negative pole	Input/Output
3	USB data +	USB data signal – positive pole	Input/Output
4	GND	Negative pole of DC supply voltage	

Table 12: Connection of USB connector

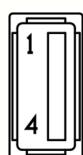


Figure 17: USB connector

### 5.8.7 I/O Port

Panel socket 6-pin.

Pin	Signal mark	Description
1	IN0	Binary input 0
2	IN0	Binary input 0
3	IN1	Binary input 1
4	IN1	Binary input 1
5	OUT	Binary output
6	OUT	Binary output

Table 13: Connection of I/O port

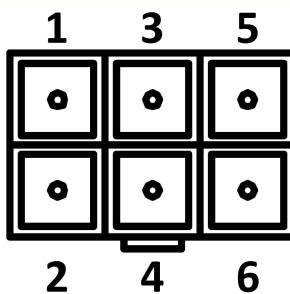


Figure 18: I/O connector

I/O user Interface is designed for processing of binary input and control (setting) binary output. Binary output is open in the default configuration. Insulation strength is 1.5 kV. The pins are isolated from each other with the same strength.

The input circuits are bipolar and allow connection as needed with common plus or minus (according to connection of an external voltage).

### Binary inputs

- Characteristics of inputs:

logical 0 / 1	Voltage	Current
log. 0 max	3 V	0.4 mA
log. 1 min	5 V	0.7 mA
log. 1 type	12 V	2 mA
log. 1 max	60 V	7 mA

Table 14: Characteristics of inputs

- Binary inputs connection with example:

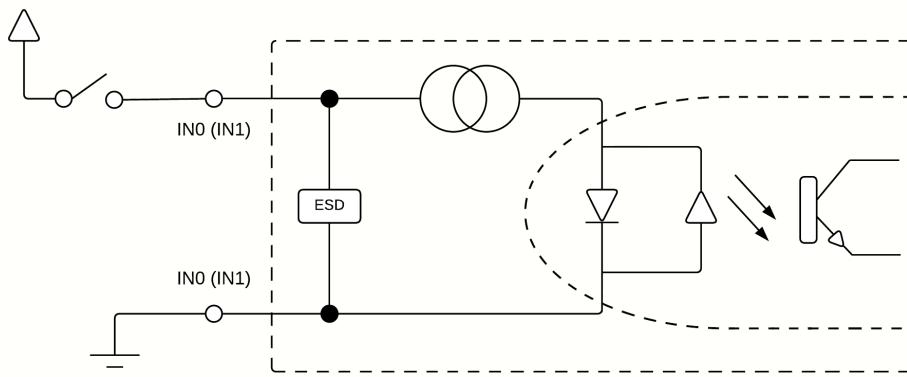


Figure 19: Binary inputs connection

### Binary output

- Binary output parameters:
  - 60 V AC / 300 mA
  - 60 V DC / 300 mA
- Current of binary output is limited by a resettable fuse (300 mA).
- Binary output connection with example:

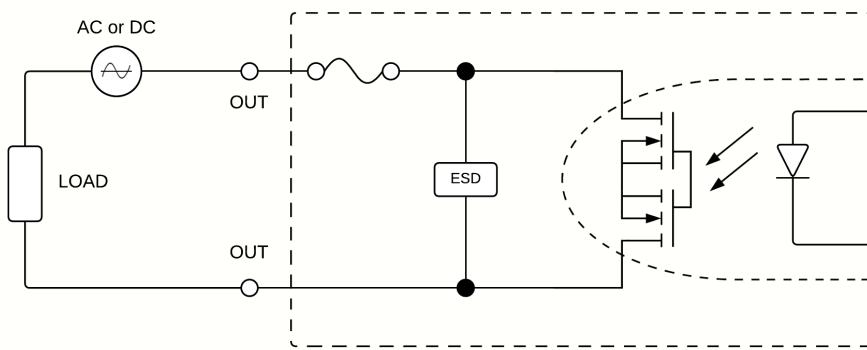


Figure 20: Binary output connection

### 5.8.8 Reset

When *PWR* LED starts flashing on the front panel, it is possible to restore the default configuration of the router by pressing the *RST* button on the rear panel. After pressing this button the default configuration is restored and then router reboots (green LED will be on).

 For pressing the *RST* button could be used a narrow screwdriver.

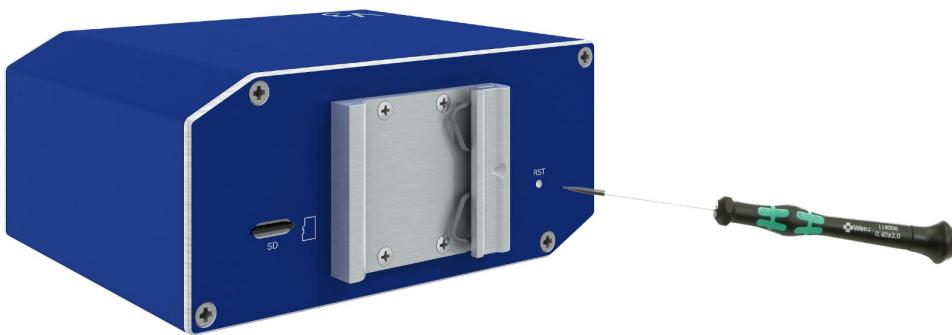


Figure 21: Router reset

 We recommend backing up configuration of the router (see *Configuration manual*) because reset of the router sets the configuration to the default state.

It is important to distinguish between reset and reboot the router.

Action	Router behavior	Invoking events
Reboot	Turn off and then turn on router	Disconnect and connect the power, Press the <i>Reboot</i> button in the web configuration
Reset	Restore default configuration and reboot the router	Press <i>RST</i> button

Table 15: Description of reset and restart router

### 5.9 Interfaces description

Besides the basic version of SPECTRE v3 ERT router there are available versions with one of the following interfaces:

- SWITCH interface

#### 5.9.1 SWITCH interface

Three LAN ports of SWITCH interface intended for v3 routers (RJ-45 connectors for connecting ethernet devices) act as it is a typical switch device. This means that the router with internal switch desk reads ethernet frames (a data packets on an ethernet link) from any port and transmits them on other ports of the switch board. Each port on the switch can transmit frames independently on every other port.

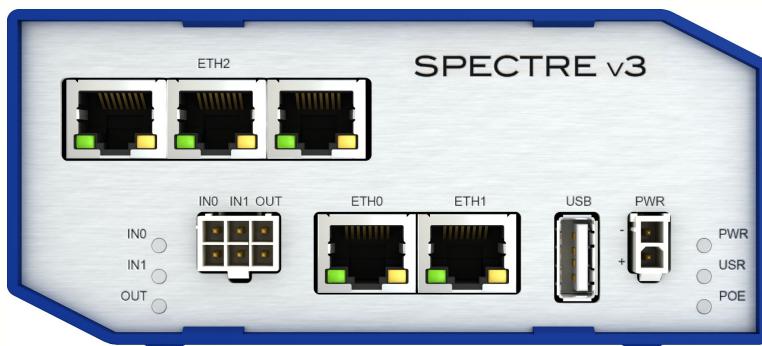


Figure 22: Version with SWITCH board

State indication of the port:

Description of indication		
Green LED	On Off	Selected 100 Mbit/s Selected 10 Mbit/s
Yellow LED	On Blinking Off	The network cable is connected Data transmission The network cable is not connected

Table 16: State indication of the port

# 6. First Use

## 6.1 Connecting the router before first use

Before putting the router into operation it is necessary to connect all components which are required to run your applications.



The router can not operate without connected power supply.

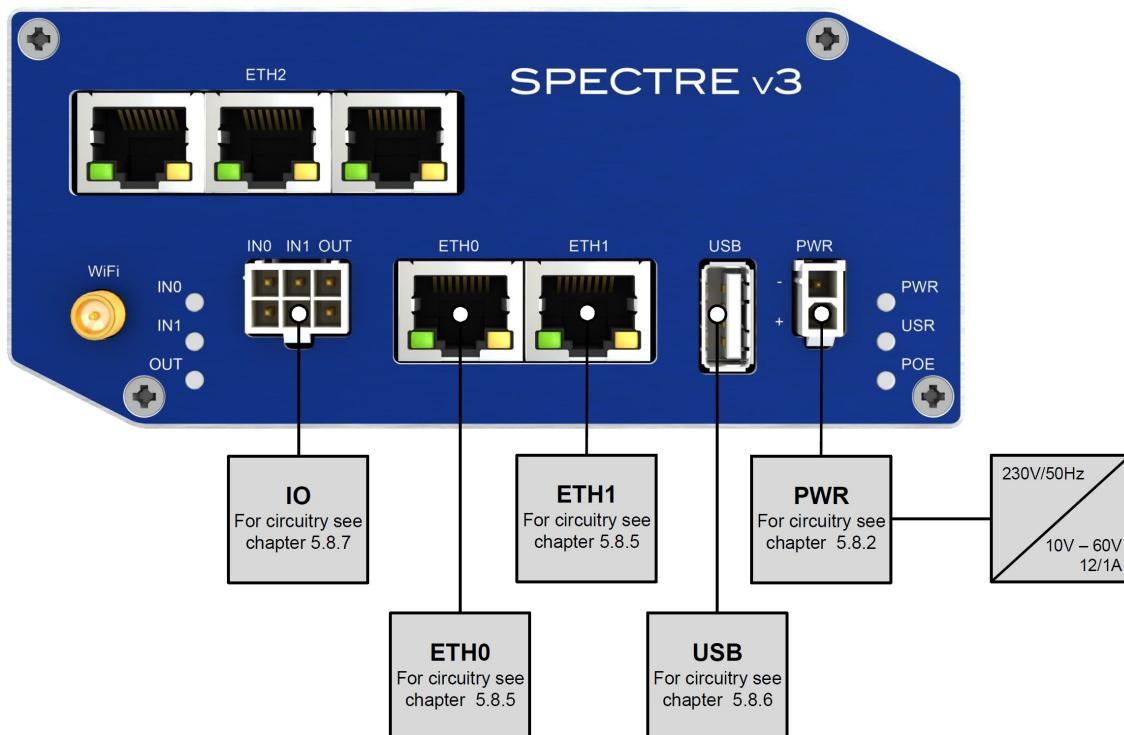


Figure 23: Router connection

## 6.2 Start

The router is put into operation when the power supply is connected to this router. By default, the router will automatically start to log on to the default APN. DHCP server will start to assign addresses for devices on the Ethernet port ETH0. Router behavior can be changed via the web interface. This is described in detail in the *Configuration manual*.

## 6.3 Configuration

### 6.3.1 Configuration over web browser

For status monitoring, configuration and administration of the router is available a web interface which can be accessed by entering the IP address of the router into the web browser. The default IP address of the router is 192.168.1.1. **Attention, it is necessary to use HTTPS protocol for secure communication over a network!**

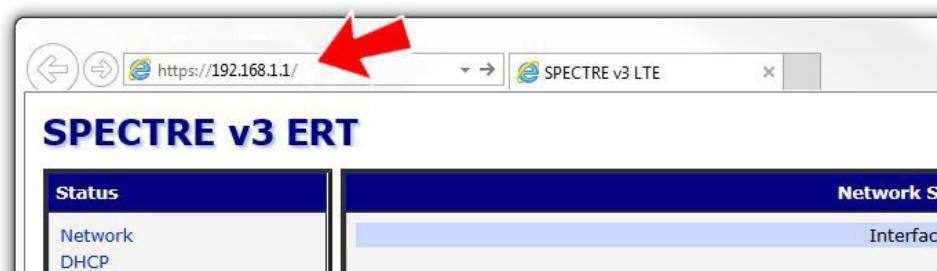


Figure 24: Entering the IP address of the router

Configuration may be performed only by the user "root" with default password "root".



Figure 25: Entering login information

After successfully entering login information user gains access to the router via his internet browser.

### SPECTRE v3 LTE Router

Status		General Status
General		Mobile Connection
Mobile WAN		SIM Card : Primary IP Address : 10.0.6.239 Rx Data : 1.0 KB Tx Data : 3.3 KB Uptime : 0 days, 0 hours, 1 minute <a href="#">» More Information &lt;</a>
WiFi		Primary LAN
WiFi Scan		IP Address : 192.168.1.1 / 255.255.255.0 MAC Address : 7C:66:9D:35:8B:74 Rx Data : 165.8 KB Tx Data : 481.7 KB <a href="#">» More Information &lt;</a>
Network		Secondary LAN
DHCP		IP Address : 192.168.2.1 / 255.255.255.0 MAC Address : 7C:66:9D:35:8B:76 Rx Data : 1.1 KB Tx Data : 7.9 KB <a href="#">» More Information &lt;</a>
IPsec		Tertiary LAN
DynDNS		IP Address : 192.168.3.1 / 255.255.255.0 MAC Address : 00:80:0F:11:70:00 Rx Data : 0 B Tx Data : 0 B <a href="#">» More Information &lt;</a>
System Log		WiFi
Configuration		IP Address : 192.168.4.1 / 255.255.255.0 MAC Address : 34:B1:F7:E1:2A:84 Rx Data : 0 B Tx Data : 0 B <a href="#">» More Information &lt;</a>
LAN		Peripheral Ports
VRRP		Expansion Port 1 : Ethernet Switch Expansion Port 2 : None Binary Input 1 : Off Binary Input 2 : Off Binary Output : Off
Mobile WAN		System Information
PPPoE		Firmware Version : 0.1.RC2 (2014-10-07) BETA Serial Number : N/A Profile : Standard Supply Voltage : 12.0 V Temperature : 45 °C Time : 2000-01-01 01:09:29 Uptime : 0 days, 0 hours, 4 minutes
WiFi		
VLAN		
Backup Routes		
Firewall		
NAT		
OpenVPN		
IPsec		
GRE		
L2TP		
PPTP		
DynDNS		
NTP		
SNMP		
SMTP		
SMS		
Expansion Port 1		
Expansion Port 2		
USB Port		
Startup Script		
Up/Down Script		
Automatic Update		
Customization		
User Modules		
Administration		
Remote Access		
Change Profile		
<b>Change Password</b>		
Add User		
Delete User		
Set Real Time Clock		
Set SMS Service Center		
Unlock SIM Card		
Send SMS		
Backup Configuration		
Restore Configuration		
Update Firmware		
Reboot		

Figure 26: Router web interface

A detailed description of the router settings via the Web interface can be found in the document *Configuration manual for v3 routers*.

# 7. Technical Parameters

## 7.1 Basic parameters

SPECTRE v3 LTE		
Temperature range	Operating Storage	-40 °C to +80 °C -40 °C to +85 °C
Cold start		-40 °C
Humidity	Operating Storage	0 to 95 % relative humidity non condensing 0 to 95 % relative humidity non condensing
Altitude	Operating	2000 m / 70 kPa
Degree of protection		IP30
Supply voltage		10 to 60 V DC
Consumption	Idle Average Peak Sleep mode	2 W 3.3 W 4.5 W 10 mW
Dimensions		55 x 97 x 125 mm (DIN 35 mm)
Weight	Plastic box Metal box	approximately 211 g (depends on interface) approximately 327 g (depends on interface)
Antenna connectors		Reverse SMA – 50 Ohm (only for versions with WiFi module)
User interface	2x ETH USB I/O	Ethernet (10/100 Mbit/s) USB 2.0 6-pin panel socket

Table 17: Basic parameters

### 7.2 Type tests and environmental conditions

Phenomena	Test	Description	Test levels
ESD	EN 61000-4-2	Enclosure contact Enclosure air	± 6 kV (crit. A) ± 8 kV (crit. A)
RF field AM modulated	IEC 61000-4-3	Enclosure	20 V/m (crit. A) (80 – 2700 MHz)
Fast transient	EN 61000-4-4	Signal ports Power ports Ethernet ports	± 2 kV (crit. A) ± 2 kV (crit. A) ± 2 kV (crit. A)
Surge	EN 61000-4-5	Ethernet ports Power ports I/O ports	± 2 kV (crit. B), shielded cable ± 0,5 kV (crit. B) ± 1 kV, L to L (crit. A) ± 2 kV, L to GND (crit. A)
RF conducted	EN 61000-4-6	All ports	10 V/m (crit. A) (0,15 – 80 MHz)
Radiated emission	EN 55022	Enclosure	Class B
Conducted emission	EN 55022	DC power ports Ethernet ports	Class B Class B
Power frequency magnetic field	EN 61000-4-8	Enclosure	160 A/m (crit. A)
Dry heat	EN 60068-2-2	+75 °C <sup>1</sup> , 40 % rel. humidity	
Cold	EN 60068-2-1	-40 °C <sup>1</sup>	
EMC/Immunity for industrial environments	ČSN EN 61000-6-2 ed.3	Generic standards	Frequency range 0 Hz to 400 GHz are covered

Table 18: Type tests and environmental conditions

<sup>1</sup>The temperatures are given for basic version of the router. For example, if the router is equipped with WiFi module, values are slightly worse.

### 7.3 Technical parameters of WiFi

WiFi	
Antenna connector	R-SMA – 50 Ohms
Supported WiFi band	2.4 GHz
Standards	802.11b, 802.11g, 802.11n
Type of device	Access point, station
Wi-Fi TX Output Power	17,3 dBm
Wi-Fi RX Sensitivity	-96,3 dBm

Table 19: Technical parameters of WiFi

### 7.4 Technical parameters of I/O port

- Characteristics of inputs:

logical 0 / 1	Voltage	Current
log. 0 max	3 V	0.4 mA
log. 1 min	5 V	0.7 mA
log. 1 type	12 V	2 mA
log. 1 max	60 V	7 mA

Table 20: Characteristics of inputs

- Binary output parameters:

- 60 V AC / 300 mA
- 60 V DC / 300 mA

### 7.5 Other technical parameters

Other technical parameters	
CPU power	2 DMIPS per MHz
Flash memory	256 MB
RAM	512 MB
M-RAM	128 kB

Table 21: Other technical parameters

## 8. Recommended Literature

- [1] Conel: **Start guide,**
- [2] Conel: **Configuration manual for v3 routers.**

[www.lucom.de](http://www.lucom.de) [info@lucom.de](mailto:info@lucom.de)

# 9. Troubleshooting



Some network cards are able to be set in situation, when it is not possible to connect the router. It is possible to solve this problem in the following steps:

- hand by selection communication rates 10 MB/s in property network cards,
- connect router over switch,
- start computer only after finalizing the start of the router.

## 10. FAQ

I can't get from internet on equipment, which is connected to router and I have NAT enabled.

- *The device's gateway has to be configured as the router.*

Router resets itself, connection on Ethernet fails.

- *It is necessary to use an antenna, which will be situated far from power supply.*

Connection fails on Ethernet or connection isn't establishing.

- *On ethernet interface of the router it is possible to switch auto negotiation off and set a rate and duplex by hand.*

DynDNS not function.

- *In private APN not functional.*
- *If the same IP address is recorded in your canonic name as dynamically assign address, it means that the operator is using NAT or firewall.*
- *NAT is possible to verify by the help of the ping on address of your server with static IP address and by the help of the router address verify and address in ping.*
- *Firewall is possible to verify, for example by remote access on web interface.*
- *The operator doesn't give out address DNS servers and without DNS server's it is impossible to connect to server dyndns.org. In log system will be this message:*
  - *DynDNS daemon started*
  - *Error resolving hostname: no such file or directory*
  - *Connect to DynDNS server failed*

IPSec tunnel is establishing but communication doesn't function.

- *Probably it is badly set up route conditionals of connected equipment or it is bad set up GW.*

L2TP or IPSec isn't establishing.

- *Verify the reason in the log system.*

I switched the router to offline mode by the SMS message, but the router is in online mode after restart.

- *Control SMS messages don't change the router configuration. For example, if the router is switched to offline mode by SMS message the router will be in this mode up to next restart. This behaviour is the same for next all control SMS messages.*

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# 11. Customers Support

You can find current information about this product on our website:

[www.conel.com](http://www.conel.com)



## Upkeep-advices:

- The SIM-card must be handled carefully as with a credit card. Don't bend, don't scratch on this and do not expose to static electricity.
- During cleaning of the router do not use aggressive chemicals, solvents and abrasive cleaners!

Conel Company hereby declares that the router narrated in this user's guide fits all basic demands of directive 1999/5/EC (R&TTE).

Router fits values of coefficient SAR defined by association ICNIRP and values of "About protection of health before non-ionized radiation".



Declaration of conformity was issued and it is possible to find it on the Conel website (<http://www.conel.com/download>)<sup>1</sup> or at producer.

<sup>1</sup>Please, use the following login information: Username – ConelFreeDownload, Password – coneldownload.